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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,810	01/22/2004	Eric Foxlin	09970-012001	6198
26161	7590	10/01/2004	EXAMINER	
FISH & RICHARDSON PC 225 FRANKLIN ST BOSTON, MA 02110			KWOK, HELEN C	
			ART UNIT	PAPER NUMBER
			2856	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,810

Applicant(s)

FOXLIN ET AL.

Examiner

Helen C. Kwok

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 1/22/04 & 7/12/04.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

1. The drawings are objected. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

In Figure 8, it is unclear what the block element represents. Please label.

Claim Objections

2. Claims 1-21 are objected to because of the following informalities. Appropriate correction is required.

In claim 1, line 8, the phrase "on the" should be changed to -- on --. In line 9, the

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word "sensor" should be changed to – sensors --.

In claim 2, line 2, the phrase "the angular" should be changed to – an angular --.

In claim 3, line 1, the word – the – should be inserted before the word "angular".

In claim 4, line 3, what is the word "them" referring to? In line 3, the phrase "the inertial" should be changed to – an inertial --.

In claim 7, line 2, the phrase "of the" should be changed to – of --.

In claim 9, line 1, the phrase "to the" should be changed to – to --.

In claim 14, line 8, the phrase "on the" should be changed to – on --. In line 9, the word "sensor" should be changed to – sensors --. In line 10, the phrase "the determined" should be changed to – a determined --.

In claim 16, line 6, the phrase "the signals" should be changed to – signals --.

In claim 17, line 6, the phrase "the signals" should be changed to – signals --.

In claim 19, line 5, the word – frame – should be inserted after the word "reference". In line 8, the phrase "the signals" should be changed to – signals --. In line 11, the phrase "the angular" should be changed to – an angular --.

In claim 21, line 3, the phrase "a location" should be changed to – a location --.

In line 8, the phrase "the locations" should be changed to – locations --. In line 9, the word "sensor(s)" should be changed to – sensor --.

Double Patenting

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the

unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-21 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over either claims 1-7, 11-12, 17-19, 22-28, 31-33 and 39-42 of U.S. Patent No. 6,474,159 (Foxlin et al.) or claims 1-9 of U.S. Patent No. 6,681,629 (Foxlin et al.) in view of either JP 2001-103395 (Shinoda) or DE 19830359 (Zwosta). Although the conflicting claims are not identical, they are not patentably distinct from each other because all of the elements presently claimed are claimed in both of the Foxlin et al. references. The instant application claims a first inertial sensor mounted on a tracked object; a second inertial sensor mounted on a

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moving reference frame; an element coupled to the sensor; and a drift corrector. The only difference between the prior art and the claimed invention is a third inertial sensor mounted on the moving reference frame spaced apart from the second inertial sensor. The references, Shinoda and Zwosta, teaches a plurality of inertial sensors mounted on a moving reference frame. (See abstract of these references). It would have been obvious to a person of ordinary skills in the art at the time of invention to have readily recognize the advantages and desirability of employing a third inertial sensor on the moving reference frame as suggested by the references of Shinoda and Zwosta to the apparatus of the Foxlin et al. references to provide multiple output signals such that the orientation and position of the tracking object is more precise and accurate.

Furthermore, to employing the third inertial sensor is a mere design expedient of duplicating parts for a multiplied effect. (Note: St. Regis Paper Co. v. Bemis Co., Inc., 193 USPQ 8, 11 (7th Cir. 1977)).

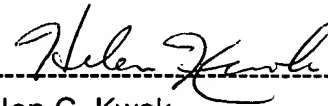
Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen C. Kwok whose telephone number is (571) 272-2197. The examiner can normally be reached on 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron E. Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Helen C. Kwok
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hck

September 29, 2004